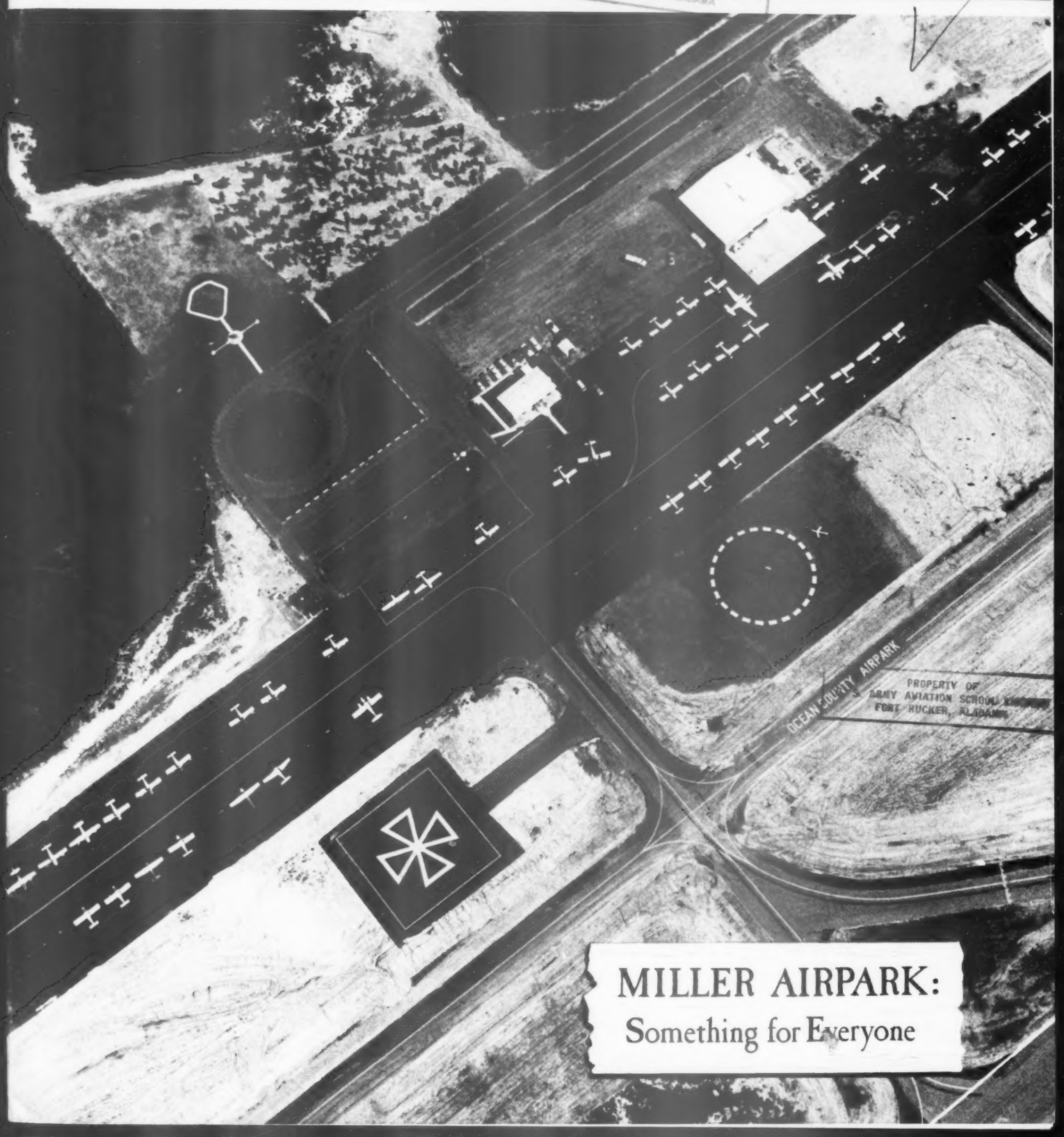
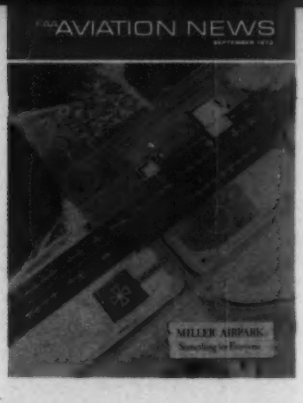
FAA AVIATION NEWS

SEPTEMBER 1972



MILLER AIRPARK:
Something for Everyone



COVER:
A clearing in the woods is on its way to national prominence. See page 8.

FAA AVIATION NEWS

DEPARTMENT OF TRANSPORTATION / FEDERAL AVIATION ADMINISTRATION VOL. 11, NO. 5

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FAA AVIATION NEWS is published by the Office of Public Affairs, PA-20, Federal Aviation Administration, Washington, D. C. 20591, in the interest of aviation safety and to acquaint readers with the policies and programs of the agency. The use of funds for printing FAA AVIATION NEWS was approved by the Director of the Office of Management and Budget, August 9, 1971. Single copies of FAA AVIATION NEWS may be purchased from the Superintendent of Documents for 20 cents each. All printed materials contained herein are advisory or informational in nature and should not be construed as having any regulatory effect. The FAA does not officially endorse any goods, services, materials, or products of manufacturers.

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Show and tell is serious business here. Light aircraft have been used frequently for illicit transportation of goods and people.

Border Crossing

The re-entry Customs procedure made painless

The Bureau of Customs provides a special inspection service for travelers in private aircraft returning to this country from Canada, Mexico, the Caribbean or other foreign lands. Normally the inspection procedure is quick and painless—and also free. This is true when the pilot in command is familiar with required advance notification procedures and carries them out correctly. Otherwise there may be a long, dreary and perhaps costly wait at the border.

When you return to the United States from a flight to any foreign country you must land first at an *officially designated* international airport, or at a specified airport where "landing rights" may be given by the Customs officer. Both kinds of airports are listed in Part 2 of the Airman's Information Manual.

Note: the word "International" may be used as part of the title of any airport—it has no significance for Customs clearance.

If you elect to land at an official international airport on your return, the Customs officer at that airport must receive notification at least one hour in advance of your arrival. This notice may be included in your flight plan if you are flying from Canada or Mexico and intend to land at a United States airport where (as indicated in AIM) "flight notification service" is available. Otherwise you can file by telephone, telegram or radio, giving your pilot's name, type of aircraft and N-number, place of departure, estimated time of arrival and number of American citizens and aliens on board.

A third method is to contact the nearest FSS from the air as soon as possible, and file a Defense VFR flight plan (required in any case if you are flying across the ADIZ line). You can ask the FSS to advise Customs for you. However, you must realize that there could be delays in forwarding your message in this manner, and that it may not arrive an hour in advance of yourself. If your flying time to the airport of entry is short—an hour or less—you must notify the appropriate Customs officer directly before you take off.

Customs will ask you only for an oral accounting of your purchases abroad, unless these include dutiable items, in which case a written form must be filled out and duty paid. However, the Customs office also serves as the clearing point for at least three other Federal agencies. Your oral declaration should include mention of all plants, or plant parts to be grown, vegetables or fruit (including lunch bag contents), since these items are regulated by the Department of Agriculture.

Also, you must declare, with respect to Public Health Service regulations, the acquisition of any animals or animal matter—this includes dogs, cats, monkeys, parrots, etc., and even natural bristles. This is important in the control of communicable diseases.

The Immigration Service requires information about any non-United States citizens you may be transporting: all on board must have positive proof of citizenship or valid alien ID cards.

In some instances, a search of your aircraft and personal effects may be conducted if officials have reason to believe that undeclared merchandise or illegal items such as drugs are being transported. Definitely not a good idea.

What should you do if, for reasons of bad weather, illness on board, mechanical problems or the like you are forced to land short of your designated airport of entry? Unless there is a medical emergency, do not allow anyone or anything to leave the aircraft and keep all visitors away until you have telephoned the nearest Custom's office, which will issue you further instructions. Of course if you crashland in an isolated area you are going to think first about survival and the welfare of your passengers.

If you start a flight to another country but for some reason find it necessary to turn around and come back to the United States *without landing elsewhere*, you are *not* obliged to clear your arrival with Customs.

If you have repairs, alterations or additions made to your airplane in a foreign country, you must report them. If these were not required for safe or legal flight in that country, they may be dutiable.

There is no charge for Customs clearance if you arrive during established business hours—usually from 8 a.m. to 5 p.m., Monday through Friday, except on national holidays. However, Customs schedules are often tailored to the needs of an individual location, and may be changed on short notice. Private flyers are advised to contact their airport of entry Customs officer before starting on a foreign flight to learn when free service can normally be expected. Overtime fees are charged for service at other times, and could range up to $25 for a single plane under some circumstances.

If you file a notice to land during off hours you will be charged for the service at overtime rates whether you arrive or not, so if you change your plans for any reason be sure to cancel your request for service. Otherwise you could find yourself paying for overtime service at two places.

The law provides for penalties for violations of Customs regulations, but if the pilot feels that the penalty is unreasonable or unjust he may appeal to the Customs office superviser for a reduction or cancellation.

The Treasury Department, Bureau of Customs, Washington, D.C. 20226 has a booklet on the subject, "Customs Guide for Private Flyers", that will be helpful to pilots flying abroad. It is for sale for 25 cents by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C., 20402. (Stock number 4802-0029) Get your facts straight before you go, and the red tape will untangle itself. ■

A Day in the Life of an APS

Paul French feels that if what he does in his job is responsible for saving one life a year in aviation, it is worth all the effort.

He is an APS, an FAA accident prevention specialist stationed at the Flight Standards District Office at Washington (D.C.) National Airport. French and the other 83 specialists stationed throughout the country are part of the agency's general aviation accident prevention program, now in its second year as a national program.

Each of these specialists is an experienced pilot, trained to spread the safety message in his district by a multi-phased program of education and persuasion. He logs many hours on the road in a station wagon heavily burdened with aviation literature and graphics. He is "on stage" several days and nights out of the week, conducting aviation clinics, and he is on call day and night to listen to pilot problems, check out rusty flyers, encourage novices and generally act as a kindly but expert friend to general aviation.

No two days in the life of an APS are ever the same—which is what makes the job interesting, if somewhat wearing—but the following journal gives you a pretty good idea of what he is up against:

8:30 A.M.

Paul begins his day with a check of the mail—rather light this morning with only three SIRs (Safety Improvement Reports) and half a dozen letters. He goes through the SIRs first. These are easy-to-use forms distributed to airports and operators around the country for the convenience of any pilot who wants to send in a safety suggestion or hazard report or complaint.

. . . so darned many potholes in the runway it's a wonder the gear can take it. Someone ought to tell the airport manager before there's a real bad accident.

. . . there's no lights on this tower—I think it's a water tower—and when the mist hangs around the airport in the morning you could easily bend a wing on it taking off.

. . . I thought there was some kind of law about having to mark power lines so the poor pilot can see them. It's bad enough to have them around airports, but who's supposed to mark them?

Paul acknowledges all three SIRs at once, and schedules slots in his calendar when he can check out the complaints himself before taking action. Sometimes the hazard is exaggerated but still very real, and the problem then is to convince someone to do something about it before an accident occurs.

10:00 A.M.

The first letter he opens turns out to be a real can of worms. Some pilot (unsigned) is complaining about another nameless pilot who is upsetting landing procedures at a small general aviation airport by landing his tail-dragger on the grass glider strip. Paul telephones the chief flight instructor at the airport and the complaint is confirmed:

"I guess the guy can't legally be called on it, since the regulations don't say anything about this, do they?"

"Negative," Paul admits. "Why do you think he does it?"

"Search me. He says it saves time getting down. The glider boys are climbing the wall, and some of the power boys are getting real unfriendly. Could be trouble. I've warned him a couple times, but he just doesn't get the message."

"How many hours does he have?" Paul asks.

"Oh, zillions. He's done a lot of flying. Pretty sharp."

"Do you suppose if somehow we could give him the impression that we respect him as an experienced pilot, he might be a little more cooperative?"

"Could be. You might have something there, Paul."

"If I set up a meeting where he could stand up and give us some of the benefits of his experience, would you help round up an audience?"

"How about tonight? We're having our monthly flying club meeting. He always turns up. Could you get over to Centerville about 7:30?"

"Tonight?"

Paul scans his heavily marked up calendar. The evening, oddly enough, is free, but only because of his long-standing promise to take his wife out to a show. Centerville is 20 miles away. He shrugs and marks it in. She'll understand. It might do some good.

11:00 A.M.

A call comes in from one of his accident prevention counselors. These are experienced, respected pilots—many are fixed-base operators—who serve without pay as local advisors to general aviation pilots. They have no official status, so their effectiveness

Flight demonstration at Frederick (Md.) Municipal Airport on a Saturday morning. Aircraft loaned by Aviation Enterprise demonstrate flight effects of improper flap usage, explained to crowd over car borne loudspeaker.

An Accident Prevention Specialist's day is often long, but never boring. Left—APS Paul French, Washington National GADO, unloads the Barany chair from his jammed station wagon to demonstrate disorientation at a safety clinic demonstration. Above left—he congratulates a pilot after an almost flawless courtesy proficiency flight. Right—straight from the shoulder questions and answers characterize the personal discussions in his office. Some pilots are belligerantly defensive, others confess to hidden fears, secret doubts. All need—and get—reassurance.

in preventing accidents depends in large measure on a delicate blend of friendliness and restraint. Paul's caller (a female pilot-counselor) has a story to tell which she thinks will cheer up his morning.

. . . you know the type, Paul, high pressure businessman, slick new plane, all the latest gadgets, plus wife and two kids. Smart pilot, figures he can handle anything. You know the type?

"I sure do." Paul is looking at his watch. He has an appointment in a few minutes, a busy afternoon scheduled, and he has not yet finished the mail. Oh well, schedules—if he works at his desk through lunch, maybe he'll catch up.

. . . so he dropped into our little place for fuel, tanks nearly bone dry, must have been flying all day. Looked bushed. Said he was bound for Harris—little private airport up in the Blue Ridge, unattended, no lights. While I was pumping gas I mentioned lightly that Harris is a mess to get into after dark, and ground fog usually moves in about this time. He gave me that "be-kind-to-poor-dumbhicks" smile. No problem, he can make it.

Well, while he was paying me, he happened to see my certificate on the wall: FAA ACCIDENT PREVENTION COUNSELOR. He asked me, "Are you FAA?"

Unofficial local rep, I told him, "And I've flown into more small Appalachian strips than I care to remember."

"What's it like, landing at night at Harris?" he asked.

"It'll streak your hair," I told him.

Then he smiled, a real smile this time, and he said, "It looks better on you. Where's the nearest hotel?"

I passed him the phone, and then I went to help his wife get the bags out of the plane. She squeezed my hand and said, "If I had a thousand dollars, I'd give it to you right now. I've been trying to get him to stop for the last 200 miles. We're all worn out." How about that?

"It's a great story," Paul says. He has heard many like it, but they never fail to warm his heart about his work and his coworkers.

12:00 NOON

The phone rings again. Another counselor —this one checking with him on their joint appearance at a safety seminar planned for the following week.

"Is there anything in particular you feel we should stress?" he asks.

"Some of the pilots here would like a review of instrument flying techniques."

"All right. I'll bring the film, *One Eye on Instruments*, and we'll talk about it. Anything else?"

"Been some arguments lately about full flap landings. Maybe you can settle that."

"Well, I'll stir the pot a little. See you next week."

2:30 P.M.

Paul just manages to get back to the office, after a hasty drive out to Manassas for a courtesy proficiency flight with a real estate agent recently turned aviator, in time to greet a young pilot arriving for a scheduled "consultation."

The youth had required a flight assist by the center two weeks earlier after experiencing engine trouble, apparently from carburetor icing. Flight assist reports are routinely passed along to the local accident prevention specialists, who then endeavor to counsel the pilot involved. In this case, in view of the pilot's youth and evident sensitivity, Paul had first called a mutual acquaintance—the franchised dealer who had sold the airplane involved. The dealer was in a position to discuss the incident with the youth without implying criticism, and to assure him that talking the matter over with Paul would not lead to his being cited with a violation.

Paul opens the conversation by asking what sort of flying the youth has been doing lately.

"All kinds of airwork. I'm working on my commercial."

"Swell. How are you on stall recovery?"

"I've been practicing. That's what I was doing when I had that engine conk out."

"Power-off stalls?"

"Yes, sure, but I know what you're thinking, and you're wrong. That was not carburetor icing. Couldn't be. The temperature that day must have been 100°."

Paul nods and asks, "Where?"

"What do you mean, where?"

"On the ground, or in the air? You must have been up several thousand feet at least, if you were practicing stalls, right?"

"Right. I always go up to 4,500 for stalls. I play it safe."

"Good. Let's say the ground temperature was 100°. The airport is at about 500 feet, so that means at your altitude the outside temperature was about 88—right? About three degrees drop for every thousand feet of altitude?"

"I think so."

"All right. Let's do some calculating. In humid weather, like we've been having, your carburetor can lower air temperature as much as 60° Fahrenheit. That could take us down to—hmm."

"I still think it was the carburetor float—it sticks sometimes."

"Oh. Is that what the dealer thought?"

"Well, no."

"You could be right, of course. But you might want to keep these figures in the back of your mind. Maximum carburetor temperature drop, 60°. Outside air temperature drop, roughly 3° for every thousand feet you climb. Here's a little booklet on the subject you might want to take along and read."

"Okay. Is that all?" The pilot stands up, relieved.

That is all. No finger wagging, no stern warnings, no criticism. Paul is well-schooled in the art of gentle persuasion. He knows the youth may dump the pamphlet into the nearest trash can on his way out, but at least they have parted friends. He may be back some day, with questions, and he may even read the pamphlet.

3:15 P.M.

Several courtesy proficiency flights are scheduled at Washington National. Paul hustles over to the ramp. The average ride takes about 20 minutes, but each pilot has his own particular problem, which may take time to surface.

5:00 P.M.

The office is closed, the phone has stopped ringing. Paul works quickly to clean up his mail, makes some necessary entries in his schedule for the coming day and studies the accident report for his district. Finally, he builds up enough nerve to call his wife.

"Honey, about that show we were going to see tonight . . ."

She understands. She is not angry. She will wait dinner for him.

Paul drains his fifth cup of coffee of the day and charges out of the office, whistling. Tomorrow could be better. ■

Cleared To Go IV

Practice Instrument Approaches

Fourth in a series of articles on the various types of air traffic clearances.

Instrument approaches, like certain kinds of landings, are something few of us ever learn to perfection, but practice helps. Even if you do a lot of IFR flying you may not have enough opportunity to complete full IFR approaches to keep your instrument technique sharp. In many busy terminals, especially those designated as high density terminals or terminal control areas, you may find that you are almost always given radar vectors to your approach course. This is a safe and efficient means of completing your approach, but many pilots feel the need to occasionally carry out the entire approach, including procedure turn, on instruments without the aid of radar vectors in order to be prepared for situations where this may be required.

When traffic conditions permit, approach control will approve what is known technically as a "successive" instrument approach. In this case the pilot has filed IFR and desires to complete the flight with an IFR approach, even though weather conditions may be clearly VFR. Such approaches are handled by approach control as actual IFR approaches and formal clearances are given. Standard IFR separation is provided between IFR aircraft and between other planes practicing instrument approaches.

Another type of practice, the "simulated IFR approach" means specifically an approach conducted under VFR conditions by an airplane *not on an IFR flight plan*, but utilizing an ILS, a VOR or an ADF to guide the airplane to the runway.

When requesting a simulated approach at an airport with a tower you must advise approach control or the tower of the type of approach you want to practice, and also tell them how you intend to terminate it—whether you will be making a full-stop landing, touch-and-go, low pass or missed approach.

Where applied, IFR separation begins when the approach controller authorizes the simulated approach, and it is maintained throughout the entire procedure—including the missed approach phase if used. VFR pilots cleared to make simulated IFR approaches may not deviate from the approved procedure until cleared to do so by the controller (except in an emergency).

At radar locations, unless you specifically request to fly the complete instrument approach, procedure turn included, there is a good chance that you will be given radar vectors to the final approach course, and you will probably be turned onto it at least two miles before reaching the final approach fix inbound. Even if you request the full approach there are times when it may be denied because you would interrupt a heavy flow of arriving and departing aircraft. Bear in mind always that although the controller is providing separation during your approach between you and all other *known* traffic (both IFR and VFR) it is still your responsibility to see and avoid obstacles and other planes. There could easily be VFR aircraft in the area that the controller has no way of knowing about.

If the practicing pilot is using a hood, or some other type of vision-restricting device, he must have a safety pilot or instructor to watch outside the cockpit for him. If he is practicing alone, he must take pains to look out for traffic or other obstacles, in addition to monitoring the instruments. Solo simulated approaches are only for familiarization with procedures, they do not count as instrument time.

At some tower-controlled airports approach control does not provide IFR separation to aircraft practicing instrument approaches. At such locations the tower will approve a simulated approach, remind you to maintain VFR conditions, and issue traffic information as appropriate.

At an uncontrolled airport which has flight service station airport advisory service, you should tell the FSS that you intend to simulate an IFR approach. The FSS will issue known traffic information, but will not approve or disapprove the approach, and no separation service is provided. Nevertheless, from a safety point of view, it is important to know whether other aircraft are using the same facilities to practice instrument approaches.

Many pilots like to select airports with approach control, but with a minimum of heavy traffic, for their practice IFR approaches. By flying in the evening or at a period of known lulls in air carrier activity, they avoid burdening the air traffic service, while enjoying the enhanced safety of ATC separation. ■

Watchful eye of a radar operator can be comforting to a pilot making a simulated instrument approach, but even with his radar screen the controller cannot be expected to read minds. Tell him at once if for any reason you find it necessary to break off the approach.

ILS RWY 27
YAKIMA MUNI
YAKIMA, WASHINGTON
YAKIMA APPROACH CONTROL
YAKIMA TOWER
GND CON
CAUTION: High terrain extends from NE to NW of VORTAC
CLEED IN ITKN
YAK 116.0 YKM
MIN SAFE ALT 25 NM 6800
FIELD ELEV 1089
LANDING MINIMA
Straight-in ⊕
Circling ⊕⊕
⊕⊕ Circling South of rwy 09-27 not authorized. Terrain and climb within this area and within 1.7 NM to 2185'
⊕ Approach W/O G/S not authorized
Procedure turn required
Control Tower
6.9 NM From LOM

TIME TO UPDATE YOUR FAR's. Rule changes to the Federal Aviation Regulations are called *transmittals*. Beside each volume number below are listed all transmittals for all Parts in that volume published to date. The number in parentheses after each Part indicates the most recent transmittal to apply to that Part.

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Part 45	Identification and Registration Marking	
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*Part 73	Special Use Airspace	
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**Part 95	IFR Altitudes (6)	
**Part 97	Standard Instrument Approach Procedures (10)	
Part 157	Notice of Construction, Alteration, Activation and Deactivation of Airports (10)	
Part 169	Expenditure of Federal Funds for Nonmilitary Airports or Air Navigation Facilities Thereon	
Part 171	Non-Federal Navigation Facilities (7)	

* Changes to individual airspace designations and airways descriptions, individual restricted areas and individual jet route descriptions are not included in the basic Parts 71, 73 and 75, respectively, because of their length and complexity. Such changes are published in the Federal Register and are included on appropriate aeronautical charts.

** Due to the complexity, length, and frequency of issuance, airworthiness directives, enroute IFR altitudes and standard instrument approach procedures are published in the Federal Register and are not included in basic Parts 39, 95 and 97. In addition, enroute IFR altitudes and instrument approach procedures are depicted on aeronautical charts.

Standard instrument approach procedures are published in the Federal Register by reference to FAA documents which are available for examination at the Rules Docket (GC-24) and the National Flight Data Center, in FAA Headquarters, Washington, D. C. and at FAA Regional offices and Flight Inspection District Offices.

Jack Lamping (left), Public Relations Director for Ocean County, N.J., and Airport Project Engineer Robert Powers anticipate an airport ringed with outdoor recreation facilities.

RECREATIONAL AIRPARK

Proving that an airport can be a thing of beauty

Toms River is a small shipping town on the coast of New Jersey, about halfway between New York and Atlantic City. It was founded in 1664 by a group of craftsmen from Delaware, lead by Sir William Tom, and it has remained a quiet, semi-rural county seat (Ocean County) down through the centuries, known to summer tourists for its excellent boating facilities and natural scenic beauty. In the past, its only connection with aviation has been the presence of retired Admiral Charles E. Rosendahl, the celebrated "father of U.S. lighter-than-air navigation" whose *Flag Point* residence is a prominent landmark on the riverfront in town. But now, thanks to a far-sighted county governing body and a progressive fixed base operator, Toms River is in the process of becoming the general aviation Mecca of the state.

Probably the last place most people would think of as a site for a new airport would be the middle of a forest. But the selection of 450 acres of scrub pine five miles southwest of Toms River for the Ocean County Airpark turned out to be an inspiration. The low-growing scrub pines, no threat to aircraft operations, have proven an ideal buffer for isolating aircraft sounds from residences. At the same time, the adjoining woodlands have made possible the future development of a unique concept in airport planning: a recreational airpark which brings together a great variety of sporting activities, from hiking to handball to virtually you-name-it.

The airport itself was dedicated in September of 1968. Within less than two years a "bare spot in the pines" was transformed into a beautifully laid-out landing facility, with a 4,900 foot runway, first-class taxiway and ramp system, a hangar fully equipped for all kinds of maintenance, and an administration and flight training building.

The idea of "planting" an airpark in the pine forest originated with Robert J. Miller, an Ocean County Freeholder (supervisor) who also happened to be a banker, an ex-blimp pilot, and a believer in general aviation as a form of adult recreation. Miller's revolutionary idea was to bring together flying with other outdoor activities in a natural setting where the usage of the land could be managed in a mutually advantageous manner.

To date, only the airpark and a picnic area adjoining it are in existence. But Ocean County Freeholders are in process of acquiring hundreds of additional surrounding acres for recreational use. The county has spent approximately $319,000 of its own money for planning, land acquisition and construction. FAA's Airport Development Aid Program has provided about $87,000 in matching grants, plus some $21,300 for runway end identification lights and for a Visual Approach Slope Indicator system.

The county is also seeking assistance from the Bureau of Outdoor Recreation, Department of the Interior, for help in constructing soccer, football and baseball fields, track and field, tennis and handball facilities, a golf course, bridle stables, nature trails, three lakes, boat docks, a nature school and lodge, etc.

Two useful pamphlets for airport sponsors interested in such aid are "Federal Assistance in Outdoor Recreation" (35 cents); and "Directory of Private Organizations Providing Assistance to Outdoor Recreation to Individuals, Organizations and Public Groups." (30 cents). Both may be ordered from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

The county's airpark funds have come from an annual appropriation in the area of $100,000; as county property it is free of real estate tax. By having the airport supervised by the Freeholders, the salary of an on-site manager has been saved. The airport is operated by a fixed base operator, Harold T. Walsh, whose staff numbers 17 employees. An extremely active flight instruction pro-

gram has approximately 200 students in various stages of training. On the average, two or three students achieve their private pilot's certificate every week.

The county receives four percent of all gross revenues at the airpark, including aircraft sales. The hangar and administration buildings, erected by the fixed base operator, revert to the county within 15 years. Tiedown space is rented to more than 80 aircraft, and there are currently over 75,000 operations a year. County planners expect to see a control tower installed within five years.

The airport facilities are so attractive that the Garden State Chapter of "Ninety Nines", the celebrated International Organization of Women Pilots, is now based at Ocean County's airpark, which incidentally served as the terminus of the 1972 All Women's Transcontinental Air Race (the Powder Puff Derby).

The young people of Ocean County are drawn to the airpark by special Sunday offers of introductory airplane rides for "pennies a pound"—the passenger pays for his weight at the rate of two cents a pound for a ten minute ride.

The great majority of the aircraft based at Miller Airpark are single-engine trainers or pleasure craft, owned for the most part by business or retired persons in Toms River.

The "Airport in the Woods" will soon be flanked by lakes, golf courses, horseback trails.

Flying as a form of leisure activity and recreation is drawing the interest of many adults in Ocean County and central New Jersey who have always had a yearning to be in the cockpit of an airplane but who have never had time or means to carry out that ambition. The attractive, orderly appearance of the airpark (try to spot some trash lying about!) does much to dispel the notion that flying is a roughneck activity not suitable for business persons with a stable reputation to maintain, or that it is too hazardous for middle-aged retired people. Ocean County Public Information Officer Jack Lamping has forcefully publicized the fact that it is just such persons who have the financial means, the intelligent interest, and the time to devote to flying that are necessary to produce a safe and skillful pilot. At Miller Airpark many such persons are realizing childhood dreams for the first time, and discovering a new interest in life that is centered in a clearing in the woods just outside of Toms River.

Freeholder Miller, who died in 1969, did not live to see the full fruition of his dream of a community airpark, but his project has been carried on by his colleagues on the Board of Freeholders, who renamed the airpark in his honor. Freeholder Director Joseph S. Portash is carrying through county plans for steady, annual expansion of the recreation area, while also tending to the growing needs of the airpark. This summer a 500 foot overrun is being added to the runway as an additional safety factor, and a second runway at the south end of the field is under construction.

Official recognition of Ocean County's contributions to aviation was given on the night of July 12, 1972, when FAA's Airport Beautification Award was presented to the Freeholders by Administrator John H. Shaffer. The award noted that Robert J. Miller Airpark . . . "was literally carved out of a virgin tree area, accomplished in a manner compatible with the surrounding area with minimal impact on the ecology of the area . . ." and further that . . . "the attractive landscaping, general neat appearance and overall cleanliness of the airport is an indication of the local civic interest and promotes the airport as a valued community asset." ■

An airport may be nominated for the FAA Airport Beautification Award by its management or by any interested person or group. Any airport in the United States open to public use may apply for the award, on the basis of having carried out a program of improvement in landscaping, paving and fencing, or construction; or for completing a special project such as a special exhibit center for vintage aircraft, a youth education center, etc.

Nominations must identify the airport, owner and operator and describe the accomplishment. Supporting evidence should include photos (before and after, if possible), published articles and correspondance. Write to the Director of Public Affairs, DOT/FAA, 800 Independence Ave., S.W., Washington, D.C., 20591. Airports which appear to qualify will be visited by a regional FAA official and upon his recommendation the Administrator may approve and—if possible—present the award.

PROPERTY OF U. S. ARMY AVIATION SCHOOL LIBRARY FORT RUCKER, ALABAMA

The well-marked ramps display a neat look of good housekeeping. Cleared areas are maintained in reserve for future expansion of tiedowns. Airport security is maintained by county police.

"This is your Computer Speaking . . ."

An experiment in automating VFR radar advisories for better service

Computerized controls were housed in the FAA tower at the McGhee Tyson Airport in Knoxville. The "Voice" came from Minneapolis.

You are flying along VFR in your single engine airplane—altitude 5,200 feet descending from 6,500, heading 335 degrees, inbound to Knoxville, 30 miles ahead. Ceiling and visibility good, situation relaxed. The radio crackles out a traffic advisory.

NOVEMBER ONE FIVE TANGO, TRAFFIC TWO O'CLOCK, FIVE MILES, SOUTH BOUND, BEACON REPORTED ALTITUDE FIVE THOUSAND THREE HUNDRED.

The Voice on the radio has a clear, measured cadence, a uniform clarity. You have spotted the traffic right away, at least four miles to the right. There's no problem, so you hold your course. A few moments later the same impersonal Voice announces that your traffic is three miles at three o'clock; then one mile at four o'clock.

Now it is well behind you, going the other way, so to get away from those clipped and cadenced cautions you switch off the transponder. Presently you are informed:

RADAR REPORT NOT RECEIVED, SERVICE SUSPENDED.

Oh, oh. Now it is mad at you. No use making enemies. You switch the transponder back on and all is forgiven. You are beginning to think the Voice has lost its tongue when you hear:

NOVEMBER ONE FIVE TANGO, YOU ARE APPROACHING FOUR THOUSAND EIGHT HUNDRED FOOT TERRAIN.

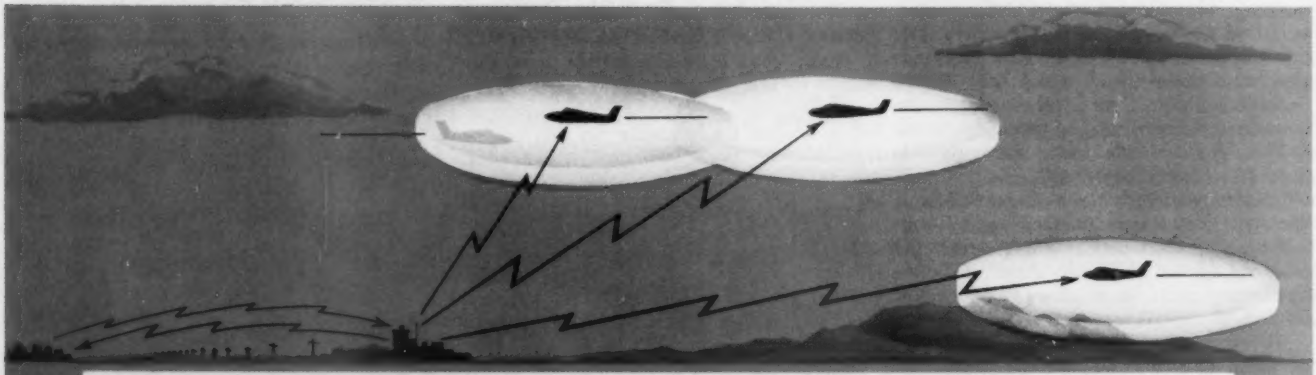
Oh, oh. A little too close to those Smoky Mountains for comfort. You alter course now, and murmur an instinctive thank you to the Voice.

No one hears you, of course, since the messages you have been receiving originated in a voice synthesizer in St. Paul, Minn., over 1,000 miles away, and were relayed to you via telephone lines and radio transmission, under the supervision of a highly intelligent computer at the Knoxville Tower.

The synthetic voice was part of an experimental Automatic VFR Radar Advisory Service conducted by FAA this summer at the Knoxville, Tenn. control facility. The six-week trial was part of a three-year program of evaluation of several computer applications. Previous tests of automatic conflict prediction/resolution functions led to the computer-controlled synthesized-voice system for VFR advisory service. The advisory system is designed to relieve both pilot and controller of some of the workload involved in VFR traffic separation in busy airspace.

Ground equipment utilized at Knoxville included a Goodyear Associative Processor, a UNIVAC 1230 computer and a land-linked voice synthesizer. Participating aircraft (about 135 volunteers) used a standard 4096 transponder and two-way radio.

During the test, traffic advisories were performed entirely by automation, although a controller stood by, monitoring the experiment continuously. The equipment detected potential problems, identified the airplanes concerned, issued appropriately detailed messages of caution to the pilot, and was capable of instructing the pilot to contact a "live" controller for assistance under certain conditions. The controller could take over manually if necessary.



During field trial of automated advisory service for VFR traffic, all traffic within 50 miles of Knoxville was tracked automatically with radar. Aircraft participating in test (transponder equipped) were warned by synthesized voice messages of any traffic that penetrated a saucer-shaped envelope of airspace around them, 10 miles in diameter and extending up to 3,000 feet above and below the airplane. Non-participating aircraft are shown here as a lightly shaded silhouette. Protected aircraft were also warned when approaching within 500 feet of any obstruction. Voice synthesizing was accomplished remotely and transmitted over telephone lines.

Participating pilots were asked to monitor a specific frequency, 128.0, when flying within 50 miles of Knoxville, and were assigned a discrete transponder code. If they did not have Mode C capability of transmitting altitude information automatically, pilots were asked in advance what altitude they would use. After switching to 128.0 the pilot received his initial automated message in the deliberate delivery:

NOVEMBER ONE FIVE TANGO, AUTOMATIC VFR ADVISORY SERVICE. DO NOT RESPOND TO TRANSMISSIONS.

During the test, a participating pilot was provided automated advisories when another aircraft penetrated his particular envelope of airspace which extended five miles horizontally in all directions from the aircraft, and 3,000 feet above and below. Advisories were triggered first when the planes were five miles apart, then three miles, then one. If more than two targets were involved the message indicated NUMEROUS TARGETS and gave detailed information on the three most critical. As traffic moved away the pilot was told, CLEAR OF TRAFFIC.

Whenever there were no specific messages within a three-minute period a "confidence message" was broadcast to reassure pilots that the system was working. If radar contact was lost, the voice quickly apprised the pilot that service was suspended, and why. If contact was re-established within two minutes, service was automatically resumed; otherwise it was announced as terminated. Also, if a plane flew out of radar range, or switched from the assigned discrete beacon code, service was ended. Pilots could voluntarily terminate the service at any time by advising Knoxville.

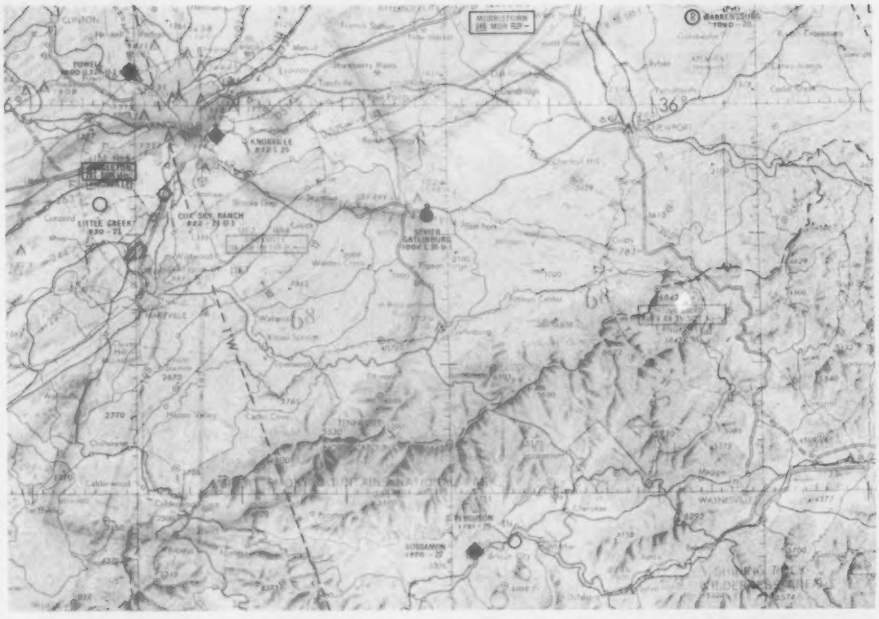
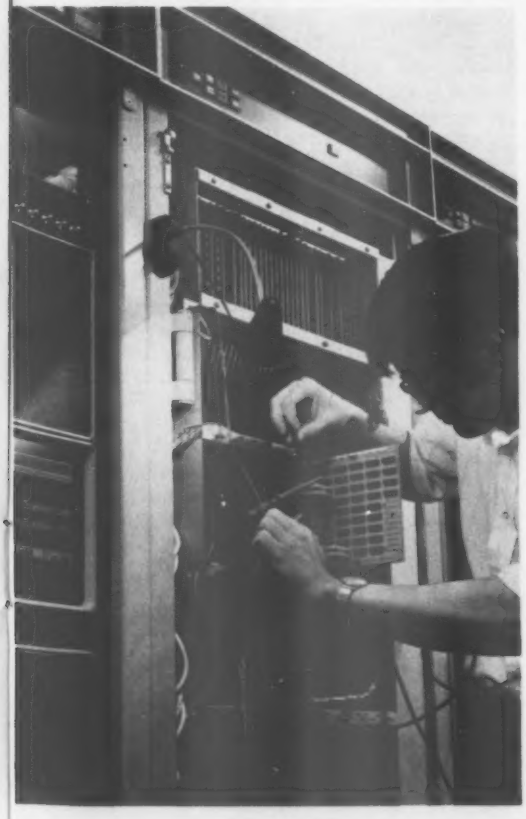


Chart shows the wide variety of terrain in the Knoxville area. The airport is situated in a low-lying river valley near the rugged Smoky Mountains, with its mile-high peaks and hazy valleys.

An engineer tests a stored memory unit of the Goodyear Aerospace STARAN computer, one of several sophisticated pieces of equipment required for automated VFR advisory system.



If for any reason it became necessary for a controller to talk directly to the pilot the voice announced, NOVEMBER ONE FIVE TANGO, CONTACT KNOXVILLE ON ONE TWO ZERO POINT TWO IMMEDIATELY. I SAY AGAIN, CONTACT KNOXVILLE ON ONE TWO ZERO POINT TWO IMMEDIATELY.

The automatic system can be programmed to perform many of the routine tasks of the terminal area. At Knoxville, inbound pilots were automatically reminded to contact approach control when they were 15 miles from the tower at an altitude below 4,000 feet MSL (the elevation that tops the airport traffic area) and were also advised by the Voice whenever there was an altimeter change.

Terrain advisories were given when the plane was about to fly within 500 feet of the ground or a ground-based obstruction. In this respect quite a challenge was provided by the varied landscape in the Knoxville area. In the circle within 50 miles of the McGhee Tyson Airport are river valleys and mountain ridges which vary in elevation from less than 1,000 feet to nearly 7,000. This geography was divided into 54 areas of various sizes, and within each area the highest terrain or obstruction was determined to the next highest hundred feet. When a plane was within 60 seconds of flying into a sector where he would have less than 500 feet of clearance the caution was broadcast. As in all cases of VFR advisories pilots were primarily responsible for avoiding the other planes and terrain; the system was there to help them accomplish this task, but not to relieve them of it.

Next step toward an automatic VFR advisory system, and an ultimate goal of conflict resolution, is a thorough analysis of the results of the field tests. This will be followed at FAA's National Aviation Facilities Experimental Center (NAFEC), in New Jersey, by design refinement and more evaluations. For obvious reasons the debugging of the system will be deliberate and painstaking.

Thus far reaction to the Knoxville experiment by both the techcnicians conducting it and the pilots trying out the system have been enthusiastic. Automated VFR advisories will not be for all airports, nor are they presently envisioned for use en route, but where the need does exist the system will offer some definite advantages.

Non-stop availability is the brightest attraction. The main criticism of the present "workload permitting," controller-spoken VFR traffic advisories service is that it is often not available when most needed: in marginal weather and in times of peak traffic. Other advantages seen in the computer generated system are improved speed, reliability, accuracy and versatility. ■

Famous
FLYERS

Viking in the Cockpit

During a WW II rescue mission that lasted more than five months Col. Bernt Balchen belly-landed this PBY on the Greenland ice cap in an effort to save 9 crew members of a wrecked B-17.

On November 9, 1942, Col. Bernt Balchen, commanding an American air base on Greenland, received word that a B-17 "Flying Fortress" had crashed somewhere on the icecap of his desolate Arctic region. This was the beginning of one of the longest, most heroic rescue missions on record, and one of the great sagas of Arctic flying.

For two weeks searching aircraft fanned out over the immense white expanse of Greenland, spurred on by the knowledge that the approaching winter solstice meant the end of daylight and the onset of winter's violence of storm and cold. Col. Balchen commandeered an airline C-54 (it had the longest range of any aircraft available) and joined in the search himself, flying through the worst weather he had ever experienced. His narrowest escape came one morning when his aircraft was caught in a *williwaw*—a violent Arctic squall that dropped him from 12,000 feet to 8,000 feet, and then flipped it up over 15,000 feet, all in a matter of seconds. The C-54 was tossed about like a leaf for nearly 20 minutes, as Balchen wrestled with the controls. The estimated the wind velocity at 175 miles per hour.

But the search went on, and the next day Col. Balchen, ranging over the island to the eastern coast, spotted several flares arching into the sky near Atterbury Dome. He dropped down low and located the wrecked B-17 in a glacial valley, the crew still alive and huddled in the unheated cabin.

There was no chance for Balchen to land. The *Fortress* had crashed on the tongue of an active glacier that was scored with innumerable and apparently bottomless crevices. In fact, the broken tail of the B-17 was hanging down into an apparently bottomless abyss, and the fissures in the ice all around the crash site made it dangerous for the crew to move about in any direction.

The rescue craft attempted to drop emergency supplies by parachute, but the howling wind whipped the chutes away from the outstretched hands of the survivors and flung them into the abyss. The best that Col. Balchen could do was to free-drop emergency bundles while making a low level pass at 50 feet, after warning the downed crew to take shelter in the cabin. Supplied with blankets and food, they were safe for the time being, but time was not on their side. Nearly six dreary months were to drag by, attended by suffering, death and despair, before the last word in their rescue drama was written. Fortunately for the survivors, the hero of this drama was a man of iron will, the premier polar pilot of his day. . . .

Born in Norway in 1899, in the small village of Tveit in the Topdal Valley, Bernt Balchen virtually grew up on skis. As a youth he was taught by his stern father how to survive for weeks or even months on his own in snow-covered woodlands and mountains—"Be a man of iron!" was his father's command.

Later he attended the war college at Oslo, and joined the air force of the Norwegian Navy. After four hours of instruction he made his solo flight in an old Farman biplane, a boxkite affair powered by a Mercedes engine. Soon he was flying patrols up and down the coast in a Norwegian-built Sopwith "Pup".

Polar Flights

In 1925 the young flight lieutenant accompanied Roald Amundsen to Spitzbergen, where the famous explorer was preparing for an aerial flight over the North Pole in a dirigible. To the same site came Richard E. Byrd, also Pole-bound. When Byrd's Fokker trimotor smashed up its skis trying to take off with a heavy fuel load, the generous Norwegians allowed Balchen to construct a more effective pair of landing skis for the Fokker, enabling Byrd to win the honor of being the first to fly over the earth's pole.

Later Balchen joined Byrd in one of the pioneer trans-Atlantic flights of 1927 (only to be beaten by Lindbergh for this historic "first"); and in 1929 he piloted the Byrd Antarctic Expedition's trimotor over the South Pole.

In 1932 Balchen returned to the Antarctic with the Lincoln Elsworth Expedition as chief pilot, and over the next three years he made two more journeys to the land down under, emerging from these experiences with a wealth of polar flying lore and an uncanny knack for finding his way in and around frozen wastelands.

At the onset of WW-II, the United States began establishing a chain of bases in the North Atlantic to enable short-range aircraft to be flown to Allies in Europe. Balchen was recruited to set up the Greenland base within the Arctic Circle at "Bluie West 8".

By November of 1942 Col. Balchen had come to know the Greenland icecap well. As soon as he examined the crash site of the downed B-17 near Atterbury Dome he radioed the nearest rescue station (some 80 miles away) to send two motor sleds. In the meantime Balchen in his C-54 directed a small Coast Guard Grumman to a snow field from which a rescue team, roped and on snowshoes, crossed the ice crevices and reached the wrecked plane. In this manner two injured crewmen were flown out safely.

Then the Arctic took its revenge. On the second rescue flight the Grumman slammed into the icecap in a blinding snowstorm and all on board perished. One of the motor sleds pitched down into a crevice, and the driver was killed. The second motor sled reached the B-17 and started back with several injured crewmen, including the co-pilot—both of his feet were frozen and gangrenous—but broke down two miles from the plane, after losing one of the rescue team to a crevice. Winter storms were raging almost constantly now, and it was impossible to attempt to reach either the stranded sled or the *Fortress*.

Both parties were kept alive with air drops of food and medical supplies as December and January passed. Balchen did not believe they could outlive the long Arctic winter. On February 3 during a brief lull in the storms he took off in a Navy PBY amphibian with a volunteer crew for a last ditch effort at rescue.

The PBY made a belly landing on a snow-covered slope near the sled camp, and the stranded party, including the still barely alive naviator, was taken on board. By this time the PBY's hull had frozen solidly to the ice, and had to be rocked free by the crew standing at the wingtips. Balchen kept the aircraft moving in a circle as the crew scrambled aboard and then he gunned the engines for a wheels-up takeoff.

A month dragged by before Balchen could find his way back to the sled camp again in the PBY. This time he unloaded a sled, a dogteam and two hardy drivers who would cross over the treacherous glacier and bring

the last three survivors in the downed *Fortress* back to camp. But by the time they returned, on April 5, the heavy sun-softened snow made a takeoff with everyone on board impossible.

After three frustrating attempts, with the engines overheating badly, Balchen and two volunteers unloaded the sled and dogs and set out for an 80 mile overland trek to the coast, waving goodbye to the others in the PBY, which flew off successfully with its reduced load. For 12 days Balchen and his companions fought their way through blinding snowstorms, climbing over massive *sastrugi* (long ridges of wind-dumped snow peculiar to the Arctic). Finally on April 18 three weary men reported in to Atterbury Dome, and the lengthy rescue mission begun in November was officially closed.

For this and other remarkable rescue and military feats in Greenland, Balchen was awarded the Distinguished Flying Cross. Later he flew numerous missions in support of the Norwegian underground, and he personally accepted the surrender of the German air command in Norway.

During a post-war duty tour in Alaska, Balchen flew over the North Pole to Thule in the northern extremes of Greenland, an area he was later to develop into an important American air base.

When he retired in 1956 he had participated in or supervised some 1,100 Arctic rescue missions. His adversaries were time and distance, cold and storm, wind and ice—old enemies of the Norseman—and his ally was the airplane which he, perhaps more than any other man, proved capable of conquering the ends of the earth.

Today at 72 Balchen is an active aviation consultant, a sometime flyer, and an ardent painter—a skill he developed patiently in the long Arctic winter. Many of his watercolors hang in galleries throughout the country, and it is just possible that his fame as a polar pilot may eventually be eclipsed by his acclaim as an artist. To Balchen, one adventure is as good as another.

In 1942 Balchen built an aircraft ferry base and supervised rescue operations on Greenland. Island is 700 miles wide, four-fifths ice.

Pilot BRIEFS

■ OPERATION ELM WATCH. Flying clubs in Great Britain were enlisted this summer in a campaign to preserve the rural beauty of the countryside. Volunteer pilots were used to help spot the destructive Dutch Elm Disease, so that diseased trees could be located, felled and burned by foresters. The typical yellowing of the leaves in mid-summer is a sign of the disease which can be seen most readily from the air. "Operation Elm Watch" could also be used to help save American elms.

■ MANUAL AID. Guidelines have been published in a new advisory circular (AC 150/5280-1, "Airport Operations Manual") to assist managers of airports requiring air carrier certification in making up their Airport Operations Manual as required by the new FAR Part 139. More than 500 U.S. airports with scheduled air carrier service are affected by the new regulation, which sets airport standards in marking and lighting, firefighting, ground vehicle control, etc.

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■ AVIATION SECURITY AT SMALL AIRPORTS as well as large ones is discussed in a new FAA Advisory Circular, AC 107-1, "Aviation Security—Airports", a guide for preparing an airport master security plan and for setting up identification programs for people and ground vehicles, conducting security surveys, educating airport personnel, and cooperating with law enforcement and FAA security personnel.

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Baffin Island

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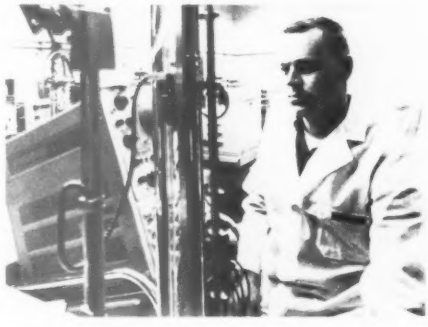

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FAA Proposals Would Rescind Airspeed Limit in TCA's, Tighten Weather Minimums for Instrument Landings

FAA has proposed rescinding the regulation (Part 91) of the Federal Aviation Regulations that imposes speed limits on aircraft operating within Terminal Control Areas (TCAs). The agency is also considering tightening the regulations affecting weather minimums for an instrument landing approach; handling of hazardous materials shipped by air; and noise standards for aircraft of older designs.

Currently there is an airspeed limitation of 200 knots for turbine-powered aircraft, and 156 knots for other aircraft when flying within an airport traffic area (defined as a circle with a five mile radius around a controlled airport, extending up to 3,000 feet). These speed limits are designed to improve the "see and avoid" capability of aircraft maneuvering in heavy traffic, much of which may not be under air traffic control. Since a TCA is, in effect, positive controlled airspace, such additional limitations would not appear essential to safety.

The second proposal would prohibit the initiation of an instrument approach at any airport where the visibility, provided by the National Weather Service or FAA, is reported below minimums. Where such weather reporting service is not available, the current practice of allowing pilots to make their own determination about beginning an instrument approach would continue in effect.

The proposed hazardous materials rule would require airline and air taxi operators to train personnel in packaging, labeling, storage and handling of such materials and on the compatibility of various hazardous substances. An existing rule would be clarified to require that the pilot be notified in writing when hazardous material has been loaded aboard the aircraft.

The noise standard (FAR Part 36) would apply to newly produced planes of older type designs, including such models as the 707, 727, 737, DC-9 and most business jets. Far Part 36 earlier established noise standards for transport and jet airplanes certificated after Dec. 1, 1969 but did not affect older designs.

Send comments to DOT/FAA, GC-24, Washington, D.C. 20591, observing deadlines as shown: No. 72-22, proposal to rescind air-speed limits in TCA (October 2). No. 72-19, engine noise standards (September 29). No. 72-21, hazardous material handling (October 9). No. 72-17, Minimums for instrument approaches (October 18).

Missing or Stolen Aircraft

The following aircraft were listed with the FAA Office of Air Transportation Security as stolen or missing at press time:

American AAIA	N9280L
Cessna 150	N8589J
Cessna 172	CFNBF
Cessna 172	N4310Q
Cessna 177	N34155
Cessna 182	N3127Q
Cessna 182	N5706B
Cessna 210	N3884Y
Piper PA-17	N4612H
Piper Cherokee	N6505J
Piper Cherokee	N6542J
Mooney 21	N9247M
Beech 18	N636CF

If you see any of these aircraft advise the nearest FAA Flight Service Station at once. (Of course any listed plane may since have been recovered by the owner.) If your aircraft is stolen, notify the local police.

Cloud Soaring Proposal Withdrawn

A proposal issued earlier this year by FAA that would have established a glider or sailplane rating for flight into clouds has been withdrawn. The agency has determined that given the high volume of IFR operations in the present day airspace such operations might jeopardize air safety.

FLIGHT INSTRUCTOR REFRESHER COURSE SCHEDULE

Third Quarter, 1972

DATE	LOCATION	SPONSOR	TYPE
9/19-21	White Plains, New York	AOPA & NAFI	FII
9/19-21	North Adams, Massachusetts	Mass. Aero Commission	
9/26-28	Liberal, Kansas	Seward Co. Comm. College	FIA
10/3-5	Burlington, Vermont	Vermont Aero Board	FII
10/3-5	Lafayette, Indiana	AOPA & Purdue University	FII
10/10-12	Virginia	Virginia Division of Aero	FII
10/17-19	Santa Monica, California	Los Angeles Chap. of 99's	FIA
10/17-19	Columbia, S. Carolina	AOPA & S. Carolina Aero Comm.	FII
10/24-26	Norman, Oklahoma	Okla. Aero Commission	
10/31-11/2	San Diego, California	AOPA & The 99's	FIA
10/31-11/2	Wisconsin	Wisconsin DOT, Div. of Aero.	FIA
11/7-9	Bethesda-Silver Spring, Md.	AOPA & Md. State Avia. Comm.	FII
11/7-9	McAllen, Texas	Texas Aero Commission	FIA
11/14-16	Anchorage, Alaska	Alaska Transportation Comm.	FII
11/14-16	Albuquerque, N. Mexico	N. Mex. Aviation Dept.	FII
11/20-22	Honolulu, Hawaii	Hawaii Dept. of Transportation	FII
11/28-30	Jackson, Mississipi	Mississippi Aero Commission	FIA
11/28-30	Callaway Gardens, Georgia	AOPA & NAFI	FII
12/5-7	Fresno, California	AOPA & Calif. Dept. of Aero.	FII
12/12-14	Lincoln, Nebraska	AOPA & Nebraska Dept. of Aero.	FIA
12/12-14	Grand Forks, N. Dakota	N. Dakota Dept. of Aviation	FII
12/19-21	Chicago, Illinois	Illinois Dept. of Aviation	FII

FIA-Flight Instructor-Airplane
FII-Flight Instructor-Instrument
AOPA-Aircraft Owners and Pilots Association
CAP-Civil Air Patrol
NAFI-National Association of Flight Instructors

Contact sponsor for confirmation of type of course, exact dates, and location.

• Cherchez la Femme

I note with some distress that in the May Flight Forum you list the following as active women pilots in 1970: Private, 11,409; Commercial, 1,897; ATR, 79. This totals 13,385, but the FAA Statistical Handbook of Aviation, 1969 Edition, lists a total of 28,401 women pilots, including 15,234 Students, 10,164 Private, 1,691 Commercial, 71 ATR, and 241 in other categories. Between 1968 and 1970 we have misplaced over 15,000 lady pilots. Please see if you can find these ladies and advise in an early issue.

Hazel McKendrick Jones
Dallas,Tex.

Easy. Some 15,787 ladies were located in the student classification in 1970, which was not included in the total in the May issue. These, plus the ones listed and 300 in miscellaneous other categories, add up to a grand total of 29,472 active women pilots in that year—a gain of 1,071 over the 1968 total.

• Communications Chatter

The article "Number Two to Land" in your June issue of FAA AVIATION NEWS follows a recent trend to be somewhat verbose on initial contact to control towers, etc. Some time ago the Army and Air Force instructed that the first thing to do was establish contact by calling the facility and giving your call sign. This eliminates repeating the entire message if you do not receive an answer on your first call. In addition, it allows the recipient a second or two to get ready to absorb the information to come, minimizing the need for repeats.

I also hear pilots causing considerable clutter by making long initial contacts to unattended UNICOMS, sometimes repeating them when they get no answer. I think I agree with the old concept and believe it uses up less air than the present procedures.

Robert J. Miller
Lancaster, Calif.

With the old-style "coffee-grinder" radio tuners it was advisable to first establish positive contact before broadcasting your entire message, because frequently more than one call was needed to be sure you had reached the right frequency. With the present degree of radio reliability and crystal-controlled radios you are reasonably sure of first-time contact and understanding if you follow a few simple rules: listen long enough to assure you have the right station, wait for a pause in other transmissions before you make your call, and then make a concise but clear broadcast. If the frequency is busy all you really need give on your first call is your N-number, your location (over a fix or landmark, or how many miles in which direction) and your intention (landing, overflying, etc), and if there is ATIS tell them you have that information. This type of call does not take much air time, and the time saved by one set of transmissions rather than two more than offsets the occasional miss on the first contact.

Of course repeating calls and questions to a UNICOM that is obviously unattended is a waste of time. However, even at locations where there is no UNICOM, or where it is unmanned, many pilots make a habit of calling in their position on down wind, to alert other aircraft in the area. FAA considers this a worthwhile safety measure; if properly done such calls can not be construed as "cluttering" the airwaves.

• Transponders Above 2,500'

In reading the June 1972 issue of FAA AVIATION NEWS the article "Proposed Transponder Rules Eased After Public Response" upset me. Am I right in assuming that if I fly above 2,500 feet MSL that I would have to have a transponder? It seems to me that the rule wasn't eased, but tightened instead.

William Kuehler
Baltimore, Md.

The proposed rule would require transponders at or above 12,500 feet instead of at 10,000 as proposed earlier. Thank you for calling our attention to the typographical error.

• Climbing out in a slip?

The article "Winds Across the Runway" (July, 1972) recommends using left aileron to keep the airplane over the runway and *right* rudder to keep the nose headed in the direction of flight. Wouldn't this cause your airplane to climb out in a slip, with its high parasite drag, and reduce your rate of climb?

David Egan
Dayton, Ohio

It sure would. Our article was concerned with the phase of flight up to the point of lift off—the most difficult portion of the crosswind takeoff. Once in the air there is no longer any possibility of groundlooping, running into edge lights or mudholes or otherwise damaging the undercarriage. During climbout you must guard, of course, against being carried by wind drift into obstructions paralleling the runway, such as trees, poles, hangars, etc.

The best procedure for crosswind takeoff is a smooth transition from the ground-contact, possibly cross-control situation, to a wings-level crab climbing along the runway centerline. As soon as the wheels break ground, ailreon pressures already applied against the crosswind have partially set up a turn into the wind. Smooth and relatively rapid relaxation of any rudder cross-control pressures and application of coordinated rudder, followed by leveling the wings and neutralizing rudder pressure when the desired crab heading is attained, will get the aircraft into the blue with the least loss of speed and lift.

A pilot who has doubts about his crosswind takeoff ability should ask for a courtesy proficiency checkride with his nearest FAA Accident Prevention Specialist. Anyone who claims to do it perfectly every time is a liar.

FAA Aviation News welcomes comments from the aviation community. We will reserve this page for an exchange of views. No anonymous letters will be used, but names will be withheld on request.

• Finding your way abroad

Since coming to Kenya in January, 1972 I find that charts are not always easy to come by and the ones available are not very good. I read with interest the article in the April, 1972, FAA AVIATION NEWS about Elrey Jeppesen and was especially interested in learning that the Jeppesen firm has opened an office in Frankfurt, Germany to supply maps for Africa and Europe. Could you give me the address of that office?

Vernal West
Limuru, Kenya

The European office of Jeppesen and Co. is: Kaiserstrasse 77, 6 Frankfurt/Main Germany. Telephone: 236187.

• Flickering Figures

In your article "Flickering Lights and Dizzy Pilots" in the May 1972 FAA AVIATION NEWS you included a "Flicker Data" box. The last figure (for a four-bladed helicopter rotor turning at 300 rpm's) should be 20 FPS (flickers per second) rather than 30. This is important since the correct rate falls within the range of highest sensitivity.

Jurgen Fohlmeister
Minneapolis, Minn.

You are right, 20 FPS is the correct figure. Thank you for calling attention to the misprint.

• The Fuel Story

The article "Getting the Lead Out" (March 1972 FAA AVIATION NEWS) was very informative and my only suggestion is that maybe you could turn the article into an Exam-O-Gram or Advisory Circular. The article brought out certain points not found in most training manuals.

Samuel Tucker
Shelby, Ohio

Much of the information contained in this article and in the follow-up story, "Alternate Fuels", which appeared in April, is incorporated in an FAA Advisory Circular 91-33, "Use of Alternate Grades of Aviation Gasoline for Grade 80/87", available free from DOT Distribution Unit, TAD 484.3, Washington, D.C. 20501.

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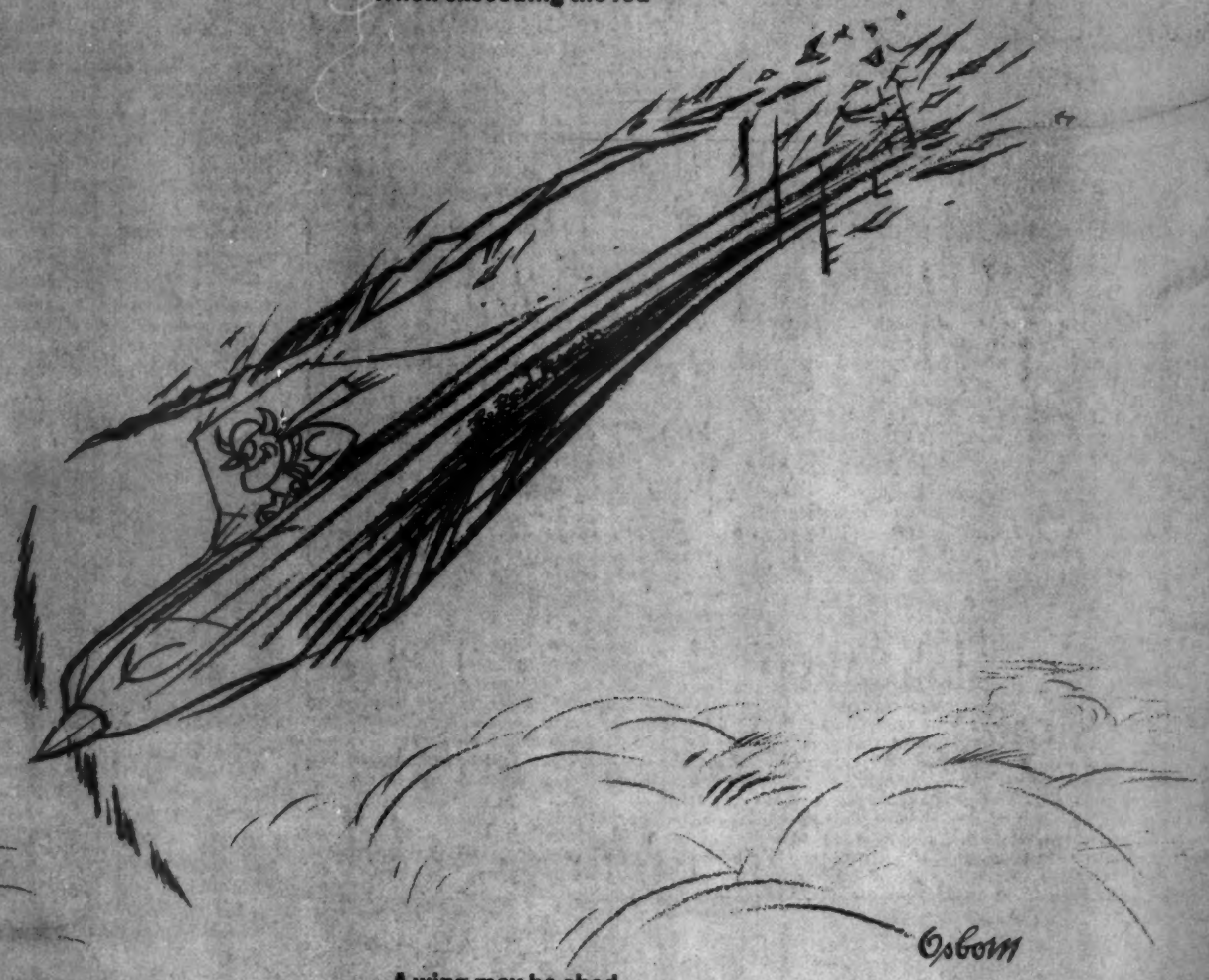
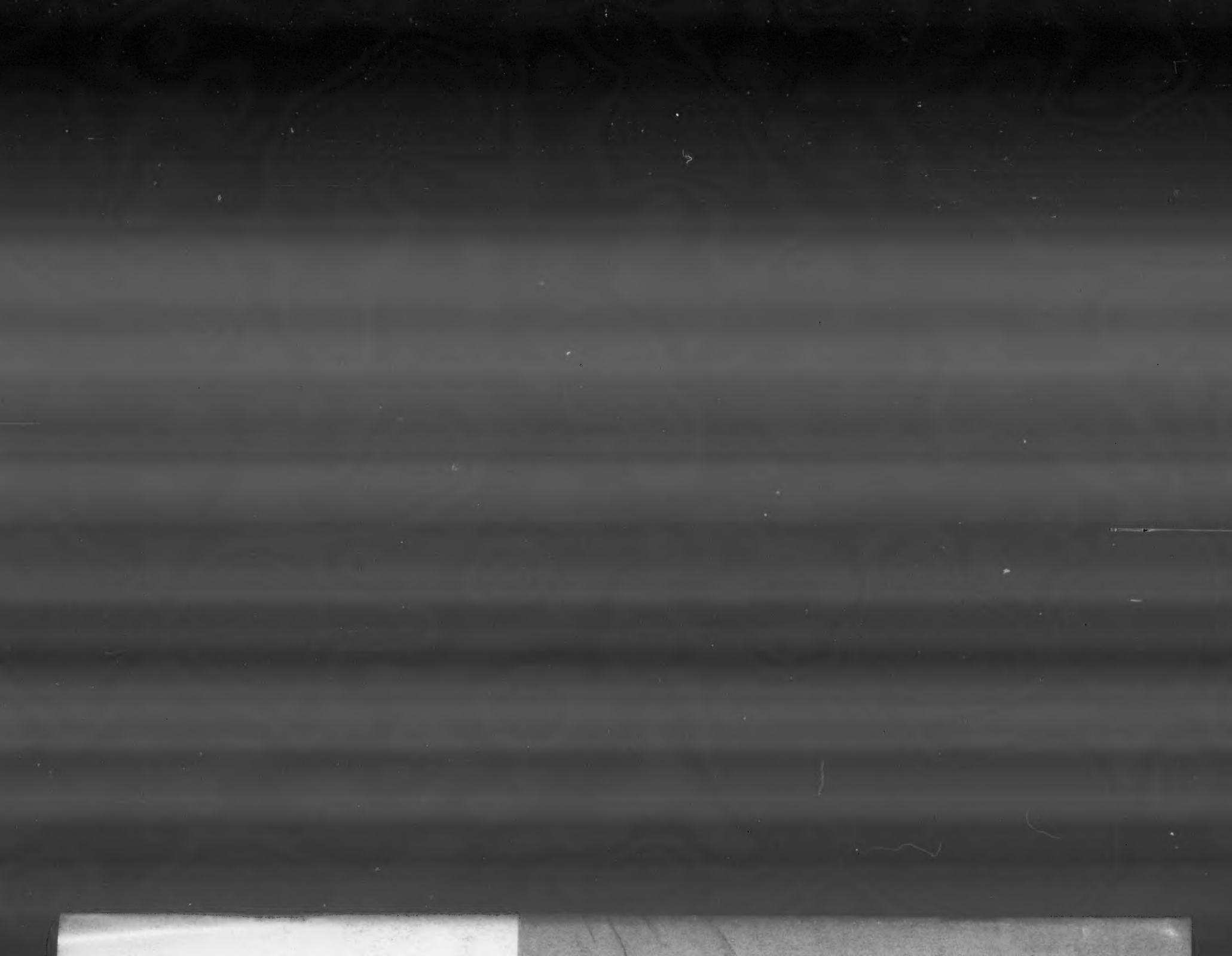
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